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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/049,989	02/20/2002	Masayuki Tomoyasu	33082M123	2600
7590 05/03/2005			EXAMINER	
Beveridge DeGrandi Weilacher & Young Smith Gambrell & Russell Intellectual Property Group 1850 M Street NW Suite 800 Washington, DC 20036			CROWELL, ANNA M	
			ART UNIT	PAPER NUMBER
			1763	
DATE MAILED: 05/03/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/049,989

Applicant(s)

TOMOYASU, MASAYUKI

Examiner

Michelle Crowell

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 3-7 and 15-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) 8-14, 26, and 27 is/are allowed.
- 6) ☒ Claim(s) 1,2 and 23-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Status of Claims

Claims 1-27 are pending in the application. Claims 3-7 and 15-21 are withdrawn from consideration. Claim 22 is cancelled. Claims 8-14, 26, and 27 are allowed. Claims 1, 2, and 23-25 are rejected.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 23, and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Kindaichi et al. (JP 05-198390).

Referring to Drawing 1 and Drawing 4, paragraphs [0002]-[0003], and [0008], Kindaichi et al. discloses a plasma processing system comprising: a chamber 1 for housing therein a substrate to be processed; first and second electrodes 2,3 which are provided in the chamber so as to face each other, the first electrode 3 having a first surface, and a second surface that is opposite to the first surface and that faces the second electrode 2; a high frequency electric power supply 4 for supplying a high frequency electric power to the first electrode via a matching unit 17; a feeding member 6, 14, 15 for feeding the high frequency electric power from the high frequency electric power supply through a feeding position to the first surface of the first

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evacuation means for maintaining the interior of the chamber in a predetermined reduced pressure state (par. [0002]); and process gas feed means for feeding a process gas into the chamber (par. [0002]), wherein the process gas is activated as plasma by the high frequency electric power to carry out a plasma processing.

As seen in Drawing 5 and paragraph [0008], Kindaichi et al. discloses a plasma processing system as set forth in claim 1, wherein the moving mechanism substantially moves the feeding position of the feeding member 14 on a circumference of a predetermined radius, which is concentric with the first electrode, on the feeding plane of the first electrode.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 2, 23, and 24 are rejected under 35 U.S.C. 102(e) as being anticipated by Nakano et al. (U.S. 6,155,202).

Referring to Figures 1-4 and column 6, line 32-column 7, line 18, Nakano et al. discloses a plasma processing system comprising: a chamber 10 for housing therein a substrate 16 to be processed; first and second electrodes 4, 8 which are provided in the chamber so as to face each other, the first electrode 4 having a first surface, and a second surface that is opposite to the first surface and that faces the second electrode 8; a high frequency electric power supply 1 for supplying a high frequency electric power to the first electrode 4 via a matching unit 21; a

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feeding member 24 for feeding the high frequency electric power from the high frequency electric power supply through a feeding position to the first surface of the first electrode 4 (Fig. 3, col. 6, line 49-col. 7, line 8); a moving mechanism 32 for moving the feeding position of the feeding member (col. 7, lines 4-8); evacuation means for maintaining the interior of the chamber in a predetermined reduced pressure state (col. 2, lines 66-67); and process gas feed means 17 for feeding a process gas into the chamber (col. 7, line 9-12), wherein the process gas is activated as plasma by the high frequency electric power to carry out a plasma processing.

As seen in Figure 3, Nakano et al. discloses a plasma processing system as set forth in claim 1, wherein the moving mechanism 32 substantially moves the feeding position of the feeding member 24 on a circumference of a predetermined radius, which is concentric with the first electrode 4, on the feeding plane of the first electrode.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kindaichi et al. (JP 05-198390) and Nakano et al. (U.S. 6,155,202).

The teachings of Kindaichi et al. and Nakano et al. have been discussed above.

Kindaichi et al. and Nakano et al. fail to expressly disclose that the feeding position

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moves at moving speed of 20 rpm or higher. However, a prima facie case of obviousness still exists because it would have been obvious to one of ordinary skill in the art to optimize the rotational speed during routine experimentation depending upon, for example, the plasma uniformity, and would not lend patentability to the instant application absent the showing of unexpected results.

Allowable Subject Matter

7. Claims 8-14, 26 and 27 are allowed.

8. The following is a statement of reasons for the indication of allowable subject matter:

The prior art, fails either singly or in combinations, fails to anticipate or render obvious a plasma processing system with a chamber, first and second electrodes, power supply, feeding means, evacuations means, process gas feed means, wherein the feeding means comprises a feeding portion, a plurality of receiving terminal portions, and a switching mechanism.

Response to Arguments

9. Applicant's arguments filed February 4, 2005 have been fully considered but they are not persuasive.

10. Applicant has argued that the feeding member in Figure 7 of the present application is receiving terminal 60 and that the rotating member 64 causes the feeding member 60 to move thereby moving the feeding position. However, as seen in Figures 7 and 8 and page 17, lines 21-37 of the specification, the feeding member 61 actually includes the feeder rod 46, the feeding

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terminal plates 65 with rotating member 64, the receiving terminal plates 63, and the receiving terminal portions 60. Furthermore, the receiving terminal portions 60 do not move, and in fact the receiving terminal portions 60 remain fixed to the electrode 21. Therefore, the portion of the feeding member that is moving its position is the receiving terminal plates 65.

11. Applicant has argued that the feeding position of Kindaichi et al. and Nakano et al. is located at the center of the electrode. It should be noted that claims 1 and 23 fail to preclude that the feeding position is located at the center of the electrode. Thus, although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

12. Applicant has argued that the feeding position of Kindaichi et al. and Nakano et al. does not move. However, as seen in Drawing 4 of Kindaichi et al., the feeding member includes members 6, 14, 15, and the position of feeding member portion 14 moves by moving mechanism 7. Likewise, as seen in Figures 2 and 3 the feeding member 24 includes members 25a and 26, and the position of the feeding member 24 moves by moving mechanism 32. Thus, as broadly claimed, the apparatus of Kindaichi et al. and Nakano et al. satisfies the claimed requirements.

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michelle Crowell whose telephone number is (571) 272-1432. The examiner can normally be reached on M-F (9:30 -6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on (571) 272-1435. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AMC *ame*
04-29-05

p.t.
PARVIZ HASSENZADEH
SUPERVISORY PATENT EXAMINER